

### **REMARKS**

Favorable reconsideration, reexamination, and allowance of the present patent application are respectfully requested in view of the foregoing amendments and the following remarks. The foregoing amendments do not add new matter, and they are fully supported by the specification and original claims.

Applicants note that claim 6 was listed as rejected in the Office Action Summary (page 1), but is not listed as rejected in any of the recited rejections. Therefore, it is assumed that claim 6 is allowed.

#### ***Rejection under 35 U.S.C. § 112, second paragraph***

In the Office Action, beginning at page 3, Claims 5 and 10 were rejected under 35 U.S.C. § 112, second paragraph, as reciting subject matters that allegedly are indefinite. Applicants respectfully request reconsideration of this rejection.

Claims 5 and 10 have been cancelled, without prejudice for pursuing the subject matter in the future.

For at least the foregoing reasons, Applicants respectfully request withdrawal of the rejection thereof under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph.

#### ***Rejection under 35 U.S.C. § 103(a)***

In the Office Action, beginning at page 4, Claims 7-9, 12, and 13 were rejected under 35 U.S.C. § 103(a), as reciting subject matters that allegedly are obvious, and therefore allegedly unpatentable, over the disclosure of U.S. Patent No. 5,827,698 in view of the disclosure of PCT Publication No. WO2000/61723. Applicants respectfully request reconsideration of this rejection.

As a preliminary matter, claim 7 was cancelled in the response filed November 14, 2005, so this rejection is moot.

Claims 8 and 12 have been amended so as to eliminate the Markush group which

defined alternatives of the polynucleotide, so that only the DNA of claim 3 (for claim 8) and claim 4 (for claim 12) are recited. As claims 3 and 4 are allowable, and claims 8 and 12 recite the *Methylophilus* bacterium with a disrupted DNA as recited by claims 3 and 4, respectively, claims 8 and 12, and those claims which depend therefrom (claims 9 and 13) should also be allowable.

Kikuchi et al. describe a lysine decarboxylase gene which is only 51% homologous with the nucleotide sequence of SEQ ID NO:3. The sequences are very dissimilar and hence one of ordinary skill in the art would not be expected to arrive at the inventive DNA sequence, the *Methylophilus* bacterium, and/or the disrupted gene resulting in suppression of lysine decarboxylase activity, without undue experimentation. As claims 8 and 12 have been amended to recite that only the DNA of claims 3 and 4, respectively, is disrupted, clearly the skilled art worker would not have motivation to arrive at the DNA sequence, disrupt it, and use it in a *Methylophilus* bacterium to produce L-lysine. Deducing the DNA of claims 3 and 4 from the disclosure of Kikuchi et al. is clearly not expected, and in fact, there is clearly no motivation to arrive at the inventive DNA of claims 3 and 4 based upon the dissimilar DNA sequences, and therefore, there is no motivation for arriving at the bacterium of claims 8 and 12.

The disclosure of the WO00/61723 reference also fails to make up for the deficiency of Kikuchi et al. with respect to the subject matters of the pending claims, since WO00/61723 only describes the use of *Methylophilus* bacteria for producing L-amino acids, and discloses nothing of disrupting any gene for the purpose of suppressing lysine decarboxylase activity, nor mentions the lysine decarboxylase gene of any sequence. One of skill in the art would not be motivated to combine the teachings of these references since there is no indication that the gene of Kikuchi et al., which is very dissimilar as compared to the claimed gene, would function in the *Methylophilus* as does the DNA of claims 3 and 4.

For at least the foregoing reasons, Applicant respectfully submits that the subject

matters of Claims 8, 9, 12, and 13, each taken as a whole, would not have been obvious to one of ordinary skill in the art at the time of Applicant's invention, are therefore not unpatentable under 35 U.S.C. § 103(a), and therefore respectfully requests withdrawal of the rejection thereof under 35 U.S.C. § 103(a).